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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/734,940

12/12/2003

Gui-Jia Su

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26710

7590

12/10/2004

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EXAMINER

RO, BENTSU

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,940

Applicant(s)

SU, GUI-JIA

Examiner

Bentsu Ro

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) ✓
Paper No(s)/Mail Date 12/12/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

FIRST OFFICE ACTION

1. Claim 7, lines 1-2, the recitation "wherein each of the plurality of cells" lacks antecedent basis. Claim 1 defines "a plurality of dc source connections". Nowhere in claims 1 or 7 has defined "a plurality of cells". Correction is required.

2. All claims are allowable because the prior art does not teach the same subject matter as claimed. The searched best prior art are US Patent Nos. 5,757,633 and 6,577,087.

The independent claims 1, 10, 16 of this instant application are claiming the structure of Figs. 7, 9, or 12. Each independent claim includes (1) a full bridge network (see Fig. 9, the single phase full bridge inverter 18, for example); (2) for claims 1 and 10, not for claim 16, a plurality of diodes connected in parallel with the commutation switches of the full bridge network (see Fig. 9, the diodes D1-D4); (3) a plurality of incremental dc voltages (see Fig. 9, the cells 17); (4) applying the sum of incremental dc voltages to the full bridge network; (5) a controller for controlling a sinusoidal phase voltage to the stator winding.

Patent No. 5,757,633

This patent does not show a structure similar to Figs. 7, 9, 12 of this instant application. Specifically, this reference does not teach "applying the sum of incremental dc voltage to the full bridge network". As shown in Fig. 2, the incremental

dc voltages applied to the inverters are individually, on a one-by-one basis. The dc voltages do not sum and then apply to the inverter.

Patent No. 6,577,087 B2

Figs. 5a, 6a, 7a, 8a, etc of this reference teach similar structure as that of Fig. 9 of this instant application. However, the '087 reference does not teach sinusoidal wave V_{an} as shown in Fig. 10 of this instant application.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. This application is in condition for allowance except for the following formal matters:

see paragraph 1 above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

5. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number (571) 272-2072.

12/9/2004

Bentsu Ro
Senior Examiner
Art Unit 2837

